

Apex Smelting  
LPC# 0316285013  
Cook County  
SF/Tech

# CERCLA Preliminary Assessment

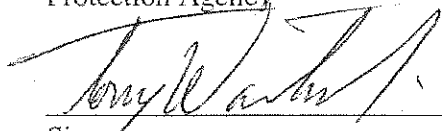


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Date

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**PRELIMINARY ASSESSMENT**

**For:**

**Apex Smelting  
Chicago, Illinois**

**PREPARED BY:  
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY  
BUREAU OF LAND  
DIVISION OF REMEDIATION MANAGEMENT  
OFFICE OF SITE EVALUATION**

**October 18, 2016**

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## **Section 1.0 Introduction**

On January 7, 2015, the Illinois Environmental Protection Agency's (Illinois EPA) Office of Site Evaluation was tasked by United States Environmental Protection Agency (U.S. EPA) Region V to conduct a Preliminary Assessment (PA) at the Apex Smelting site in Chicago, Illinois. The site is located at 2537 West Taylor Street and 2601 West Taylor Street, Chicago, Illinois 60612, Cook County (lat. 41.869138 and long. -87.690758). The Preliminary Assessment is performed under the authority of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) commonly known as Superfund.

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (40CFR Part 300) requires that a Preliminary Assessment be performed on all sites entered into the Superfund Enterprise Management System (SEMS), U.S. EPA's inventory of hazardous waste sites.

A Preliminary Assessment is the initial step in the Superfund process that utilizes a limited-scope investigation and collects readily available information. The Preliminary Assessment distinguishes between sites that pose little or no threat to human health and the environment and those that require further investigation. The Preliminary Assessment also supports emergency response and removal activities, fulfills public information needs, and generally furnishes appropriate information about the site early in the assessment process.

If the findings of the Preliminary Assessment determine that further investigation is necessary, the site will continue to progress through the Superfund process and receive a Site Inspection. A Site Inspection will evaluate the extent that a site presents a threat to human health and/or the environment. This may be accomplished by collecting and analyzing wastes and environmental media samples to determine whether hazardous substances are present at the site and are migrating to the surrounding environment. The Site Inspection will provide

necessary information that will determine if the site qualifies for possible inclusion on the National Priorities List (NPL) or should have No Further Remedial Action Planned (NFRAP). At any time throughout the Superfund evaluation process the site may be NFRAP, be referred to another state or federal clean-up program, or recommended for further action. The Preliminary Assessment is performed under the authority of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) commonly known as Superfund.

## **2.0 Site Background**

### **2.1 Site Description**

Apex Smelting is located at 2537 West Taylor Street in Chicago, IL in Cook County (Figure 2). The site is specifically located at northeast corner of the southeast ¼ of Section 13 Township 39 North and Range 13 East of the Third Principal Meridian. The property is composed of two parcels. The first parcel is located at 2537 West Taylor Street and is approximately 6 acres in size. The second parcel is located at 2601 West Taylor Street and is approximately 4.5 acres. The two properties are composed of open land with no buildings on either parcel of property. According to aerial photos the buildings on the parcel located at 2537 West Taylor Street were demolished between 2005 and 2007.

The first parcel, also known as 2537 West Taylor Street, is bounded on the east by South Campbell Avenue. The west boundary is occupied by a rail line called the CSX Transportation Inc. that runs north and south. The north side of the property is bound by Taylor Street and the south is bordered by Fillmore Street. The nearest resident is located approximately 400 feet to the east.

The second parcel, also known as 2601 West Taylor Street, is bounded on the east by a rail line and on the west by industrial property with a radio tower located on the property. The north side of the property is bound by Taylor Street and the south by a rail line called the B & O

Chicago Terminal Railroad. The nearest residential property is located approximately 450 feet to the southeast. The location of both properties is located in a light industrial/residential area.

According to the U.S. Department of Agriculture Soil Conservation Service, the subject site area belongs to the Urban Land-Milford soil series. This soil series consists of built up and deep, nearly level, poorly drained soils that have silty and clayey subsoil; formed in glacial lake sediment. The surface layer of the Milford Series is a black, very firm heavy silty clay loam. The subsoil is approximately two feet thick. The upper portion is a dark gray, very firm heavy silty clay loam. The middle part is mixed dark gray and yellowish brown, very firm heavy silty clay loam and the lower portion is gray, very firm silty clay loam. These soils are underlain by the Carmi Member of Equality Formation (Illinois State Geological Survey). The Carmi Member is largely quiet-water lake sediments, dominantly well bedded silt with laminated thin beds of clay, and local lenses of sand and sandy gravel along beaches (Benchmark Environmental Services Inc. 2008). Fill material such as sand, gravel and crushed concrete covered the entire site, anywhere from 0 – 7 feet below ground surface and brown silty clay is underneath the fill material.

The ground water at the property is found approximately 3 to 5 feet below ground surface according to information obtained from the Phase II investigation conducted by Environment Protection Industries. All drinking water supplies in the immediate area are obtained from the City of Chicago Water Department and is originated from surface water intakes in Lake Michigan.

## 2.2 Site History

This has not been officially confirmed, but according to Sanborn maps, Apex smelting began operating on both these parcels in 1950 and prior to that parcel 2 was occupied by Apex Smelting as far back as 1923. Apex Smelting occupied the properties up until at least 1992.

Prior to Apex Smelting, parcel 2 (2601 West Taylor) was owned by Heywood-Wakefield Company. Not much information pertaining to parcel two is available other than the fact that it was listed on a 1923 and 1950 Sanborn Map as being part of Apex Smelting Company. The Sanborn Map lists zinc refining and aluminum foundry as the activities that took place on parcel two. In 2012, a Pre-CERCLA screening was performed for parcel two at 2601 Taylor Street. When it was determined that parcel one at 2537 Taylor Street was also a part of Apex Smelting, it was recommended that both site be included in the Apex Smelting Preliminary Assessment. The Pre-CERCLA Screening focused only on the 2601 Taylor Street parcel of property since it was the property that was adjacent to a former lead facility (Cookie Miller Yoelin).

Parcel one (2537 West Taylor Street) was owned by Chicago Paper Mill and Box Company. This parcel was listed in the 1940 Metals Directory and the 1963-1964 Metals Directories as an aluminum smelter and scrap metal dealer. There has been a long history with underground storage tanks associated with this parcel. The most recent owner was Alumatco which recycled aluminum scrap into ingots, along with nickel scrap recovery. Alumatco, which was enrolled in the Illinois EPA Voluntary Cleanup Program, went bankrupt and never received the NFR for the property after removing the tanks and was subsequently removed from the Illinois EPA Voluntary Program.

### 2.3 Regulatory Status

Based upon available file information, Apex Smelting does not appear to be subject to Resource Conservation and Recovery Act (RCRA) corrective action authorities. Information currently available does not indicate that the site is under the authority of the Atomic Energy Act (AEA), Uranium Mine Tailing Action (UMTRCA), or the Federal Insecticide Fungicide or Rodenticide Act (FIFRA).



### **3.0 Field Inspection Activities**

#### **3.1 Field Inspection**

On July 21, 2015 Illinois EPA Office of Site Evaluation conducted a site reconnaissance to evaluate site conditions and to collect X-Ray Fluorescence readings of the 2601 Taylor Street site. The Illinois EPA Office of Site Evaluation collected approximately 17 XRF readings from the 2601 Taylor Street site. The 2601 property had a large pile of dirt located in the middle of the site. The site is located in a light industrial/residential neighborhood. The nearest school is approximately a half mile to the north. The XRF results can be found in Table 1. There were no XRF samples collected from 2537 Taylor Street. It was covered with 4 feet of gravel applied during a previous removal of tanks. Parcel one had a fence on the southern border and a building on the eastern border. The northern border was Taylor Street and the western border was train tracks. Both addresses were easily accessible to the public. The 2601 property had a large pile of dirt located in the middle of the site. The site is located in a light industrial/residential neighborhood. The nearest school is approximately a half a mile to the north.

#### **3.2 Past Environmental Investigations**

The past investigations associated with Apex Smelting include a Pre-CERCLIS Screening conducted by Illinois EPA in 2012 at parcel two, 2601 Taylor Street. The parcel located at 2537 Taylor Street has had numerous investigations conducted. The earliest recorded investigation was a 1996 Phase I Environmental Site Assessment conducted by Premier Environmental Limited, although it is unknown who requested it at this time. Environmental Services Inc. conducted a Limited Subsurface Investigation in December 2001. Mostardi-Platt Environmental completed a 45 day Report for a Leaking Underground Storage Tank in April 2002. Environmental Protection Industries conducted a Phase I and Phase II Subsurface Investigation

in 2004. A Limited Remedial Investigation was completed by Benchmark Environmental Services on January 10, 2007. A Comprehensive Site Investigation Remedial Objectives Report, Remedial Action Plan, Remedial Action Report was followed up by Benchmark Environmental Services and completed on August 6, 2008.

The Phase I Environmental Site Assessment was done in 1996; a copy of the report was not provided to the Illinois EPA but was referenced in Environmental Protection Industries Phase II report. No copy was provided with the Phase II, therefore; no data or information is provided.

In 2001, a Limited Subsurface Investigation was conducted by Environmental Services Inc. to see if three out-of-service underground storage tanks (UST) had leaked any of their contents. The investigation consisted of seven soil borings and all samples contained varying concentrations of Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) and Polynuclear Aromatics (PNAs). Total Petroleum Hydrocarbon (TPH) was discovered in sample B-8 that was above laboratory detection levels. Additional delineation and remediation was recommended.

The Mostardi-Platt 45 day report documented the three USTs on the property that were discovered by Environmental Services Inc. the previous year and documented in the Limited Subsurface Investigation. The tanks were reported to contain heating oil in two and gasoline in the one. The two heating oil tanks were cleaned out and a concrete slurry mixture was added and the tanks were abandoned in place. The tanks were 10,000 gallon tanks. The 1,000 gallon gasoline tank was also filled with concrete slurry and abandoned in place.

Environmental Protection Industries performed a Phase II Subsurface Investigation in 2004. During this investigation, two more USTs were discovered along with the three that had been abandoned in place. Analytical results indicated contamination surrounding the two additional tanks that were identified during the investigation. They were presumed to be 10,000 gallon fuel oil tanks. No groundwater investigation was performed during the Phase II.

In January 2007 a Limited Remedial Investigation was completed by Benchmark Environmental Services. The purpose of this investigation was to follow up on the tanks from the previous investigation and to enter the site into the Voluntary Program with the Illinois EPA and pursue a No Further Remediation Letter (NFR). Additional sampling was recommended to close out the LUST incident.

The Comprehensive Site Investigation Remedial Objectives Report, Remedial Action Plan, Remedial Action Report was followed up by Benchmark Environmental Services and completed on August 6, 2008. During this investigation a total of four tanks were removed including the three that had been filled with concrete slurry. Following the excavation the contractor proceeded to grade the property and cover the entire parcel with visqueen plastic sheeting. The plastic sheeting was overlain with four feet of crushed recycled concrete to grade surface. The purpose of the plastic sheeting and crushed concrete was for an engineered barrier.

## **4.0 Potential Sources**

### **4.1 Source One**

The first potential source associated with Apex Smelting includes contaminated soil associated with the smelting process such as BTEX and lead. The contaminated soil seems to only be located at the parcel two (2601 Taylor Street) properties, since parcel one (2567 West Taylor Street) is covered with 4 feet of gravel. The contaminated soil seems to be located in isolated areas across the site and located in the upper fill area throughout the site according to previous investigations. The contaminated soil consists of elevated levels of heavy metals, PAHs and petroleum related compounds directly due to activities that occurred over the years on the property. The contaminated soil associated with the 2567 property was being addressed in the Illinois EPAs SRP Program. The Remedial Applicant had submitted a Comprehensive

Site Investigation Report, Remedial Objectives Report, Remedial Action Plan, and Remedial Action Completion Report in August, 2008. The SRP Project Manager had some questions on the reports and directed them toward the Remedial Applicant. The Remedial Applicant never responded to requests sent by Illinois EPA Project Managers and on March 28, 2014 the 2567 property was terminated from the SRP Program. However, much of the property and the contaminated soil had been addressed with an engineered barrier when four feet of gravel was applied to the property.

## **5.0 Pathway Discussions**

CERCLA identifies three migration pathways and one exposure pathway, as identified in its Hazard Ranking System, by which hazardous substances may pose a threat to humans and/or the environment. Consequently, sites are evaluated on their known or potential impact to these pathways. The pathways evaluated are groundwater migration, surface water migration, air migration and soil exposure.

### **5.1 Groundwater**

The source of Chicago's drinking water is obtained from Lake Michigan. The City of Chicago has a ground water ordinance restricting the use of private wells for drinking water purposes. The groundwater at the site is classified as Class II groundwater. The hydrogeology of the Chicago area consists of thin and permeable glacial drift. The glacial drift aquifer system is not used as a source of drinking water in the Chicago area. The shallow bedrock aquifer system underlies the glacial drift system and consists of Silurian-age dolomite formations and underlying late Ordovician shales. The two deep bedrock aquifer systems include the Cambrian-Ordovician and the Mt. Simon. The Cambrian-Ordovician aquifer is approximately 600 feet thick. The Mt. Simon aquifer is about 275 feet thick and is located in Cambrian-age Mt.

Simon sandstone. During past investigations groundwater was encountered at 10 feet below ground surface. Groundwater flow at the site is in a north east direction. During the PA there were no ground water samples collected and it is not thought that the ground water would be impacted by Apex Smelting at this time.

## 5.2 Soil Exposure

The Apex Smelting site is located in an industrial/residential area. The site is not surrounded by a fence to deter or restrict access. It did appear that during the site reconnaissance conducted in July 2015 that some illegal dumping had occurred at the 2601 Taylor street property. The nearest school is approximately 750 feet away from the site and the nearest resident is approximately 400 feet to the east of the site. The property located at 2537 Taylor Street has four feet of crushed recycled concrete as an engineered barrier and underlain the crushed concrete is brown silty clay to approximately 15 feet according to soil boring logs. Based upon soil borings completed during the Phase II Investigation, the property appears to contain up to approximately five and a half feet of fill material. The thickness of the fill material varies throughout the property. The fill material consists of bricks, concrete, sand, and cinders. There has been no investigation on the 2601 Taylor Street property but the soil composition is presumed to be similar to the adjacent 2537 property. There was limited vegetative cover on both parcels of the site. Nearby population data it provided in the table below.

**Nearby population within one mile of the site.**

<u>Distance</u>	<u>Population</u>
On-Site	0
0-1/4	1221
1/4-1/2	5815

½-1 mile	14693
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Population data obtained from ArcView block pop data provided in the ArcView program.

There was some XRF screening conducted on the 2601 property. Seventeen screening samples were collected in July, 2015. One screening sample showed lead to be at 593 ppm. But the remaining 16 XRF samples showed lead to be below 158 ppm in the remaining samples. The Remediation Management Levels (RML) for lead in residential areas is 400 ppm and 800 ppm for industrial areas.

### 5.3 Surface Water

The surface water route for this site is most likely the storm water drains located in the street. The storm water system is part of the City of Chicago storm water collection system. The site is fairly flat and the nearest river or stream is the Chicago Sanitary and Shipping Canal located approximately one mile to the south. The nearest surface water was a pond located in Douglas Park which is approximately 900 feet to the southwest. The nearest wetland is also located in the park approximately 900 feet from the site. There did not appear to be any surface water routes from the site to the pond in the park. According to the topo map, there were no nearby streams or lakes. There were no surface water or sediment samples collected during the PA and therefore, the surface water pathway is not thought to be of concern at this time.

### 5.4 Air Route

No formal air samples were collected from the Auto Parts City during previous sampling events conducted on the property and therefore, is not considered to be a pathway of concern at this time.

### Population within 4 mile of Apex Smelting

<u>Distance</u>	<u>Population</u>
0-1/4 mile	1221
1/4-1/2 mile	5815
1/2-1 mile	14693
1-2 mile	93375
2-3 mile	144827
3-4 mile	173936

Population data obtained from ArcView block pop data provided in the ArcView program.

## 6.0 Summary

The Apex Smelting site was brought to the attention of the Illinois EPA after it was discovered that it was adjacent to the Cookie Miller Yoelin property that was evaluated during the Urban lead sites investigation conducted in 2007. A Pre-CERCLA Screening was conducted in 2012 and as the Pre-CERCLA Screening was wrapping up, it was discovered that there was another adjacent piece of property that was also part of Apex Smelting that had not been evaluated during the Pre-CERCLA Screening. Therefore, it was recommended to advance the site to the Preliminary Assessment (PA) process and further evaluate the newly discovered property. During the PA it was revealed that the newly discovered parcel (2537 Taylor Street) had entered into the State of Illinois Site Remediation Program (SRP) in June 2007. The property previously had underground storage tanks associated with past activities. The tanks were removed and visqueen along with four feet of recycled crushed concrete was deposited over the entire parcel which was approximately 6 acres in size. The property was removed from the SRP program before completing the requirements to receive a No Further

Remediation Letter (NFR). The removal from the program was due to an apparent bankruptcy with the property and all correspondence ceased upon submittal of the Remedial Action Completion Report. The site was removed from the SRP in 2014.

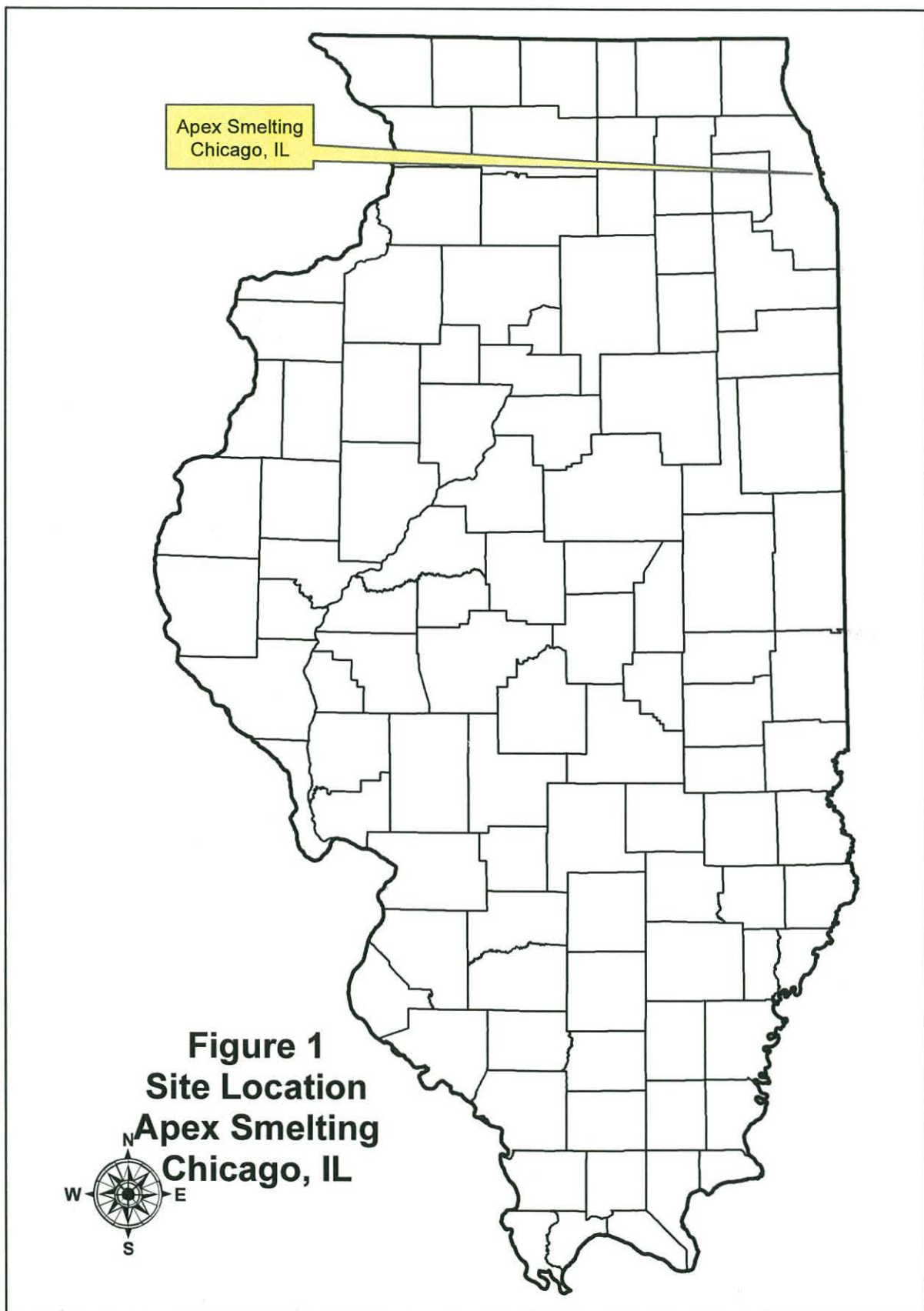


## **7.0 References**

- Phase II Subsurface Investigation, Environmental Protection Industries, April 12, 2004.
- Comprehensive Site Investigation, Remedial Objectives Report, Remedial Action Plan, and Remedial Action Completion Report, Benchmark Environmental Services, August 6, 2008.
- Limited Subsurface Investigation, Environmental Services Inc., December 5, 2001.

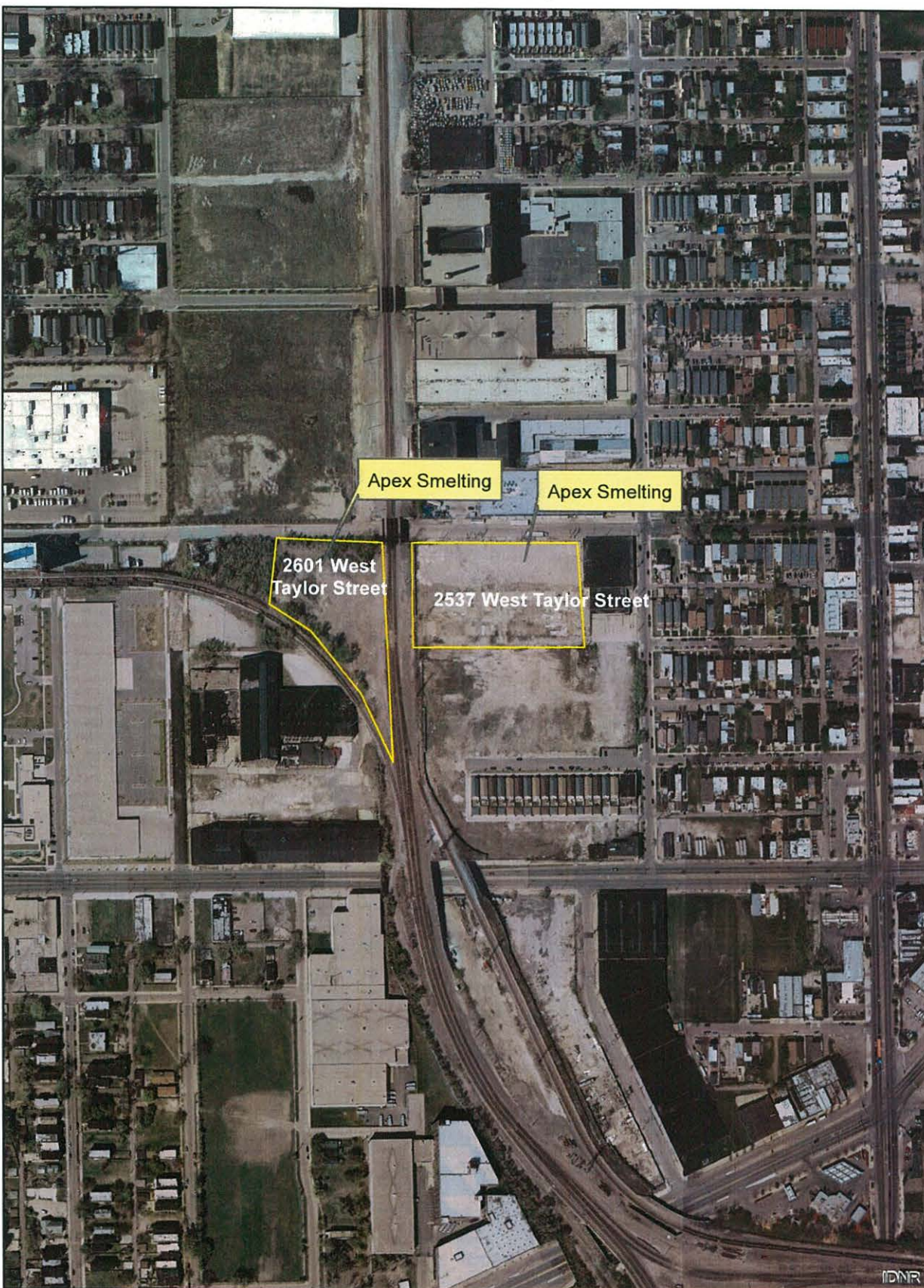
# FIGURES

**Figure 1**  
**Site Location Map**



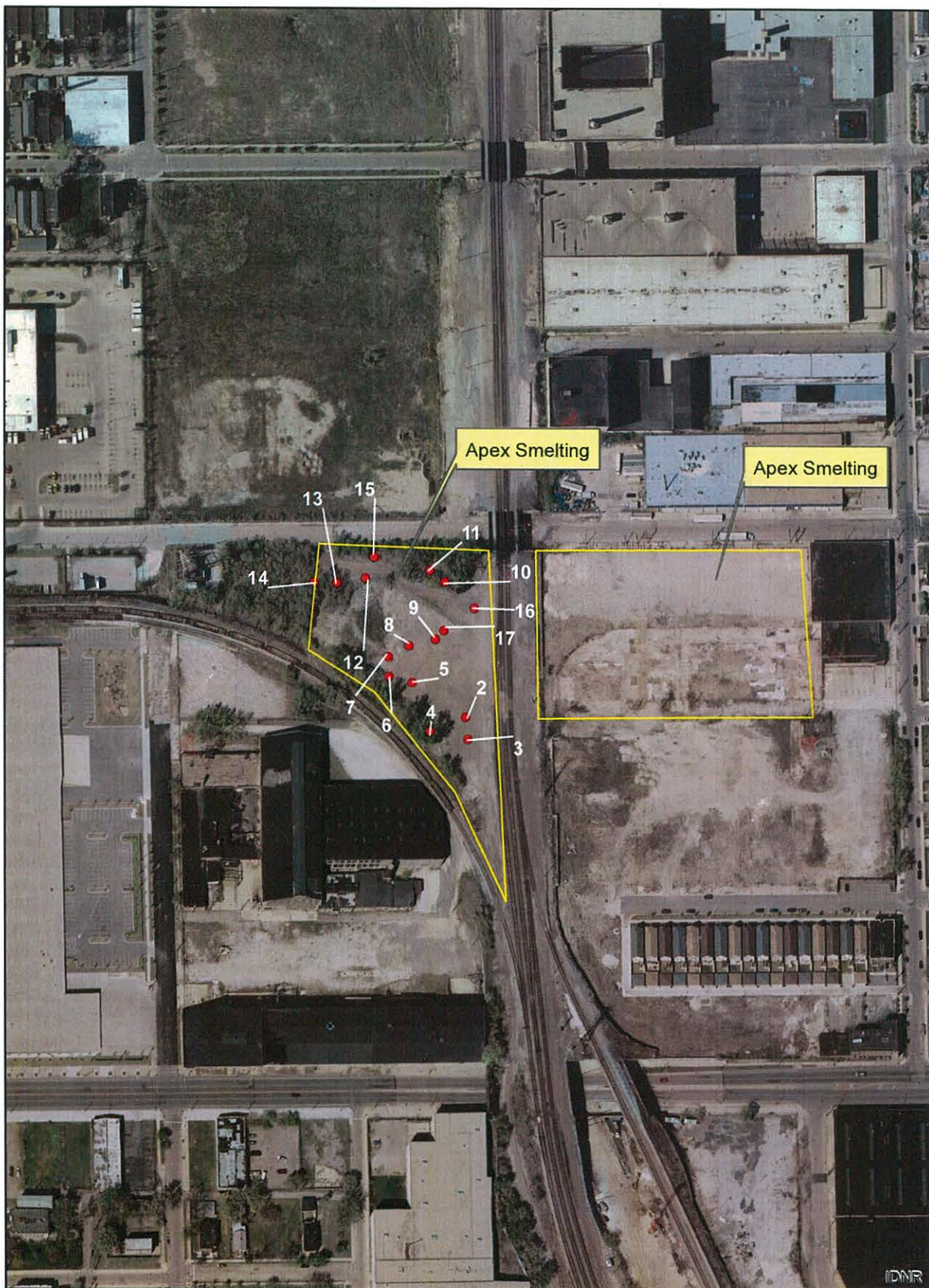


**Figure 2**  
**Site Boundary**  
**Apex Smelting**





**Figure 3**  
**XRF Locations**  
**Apex Smelting**



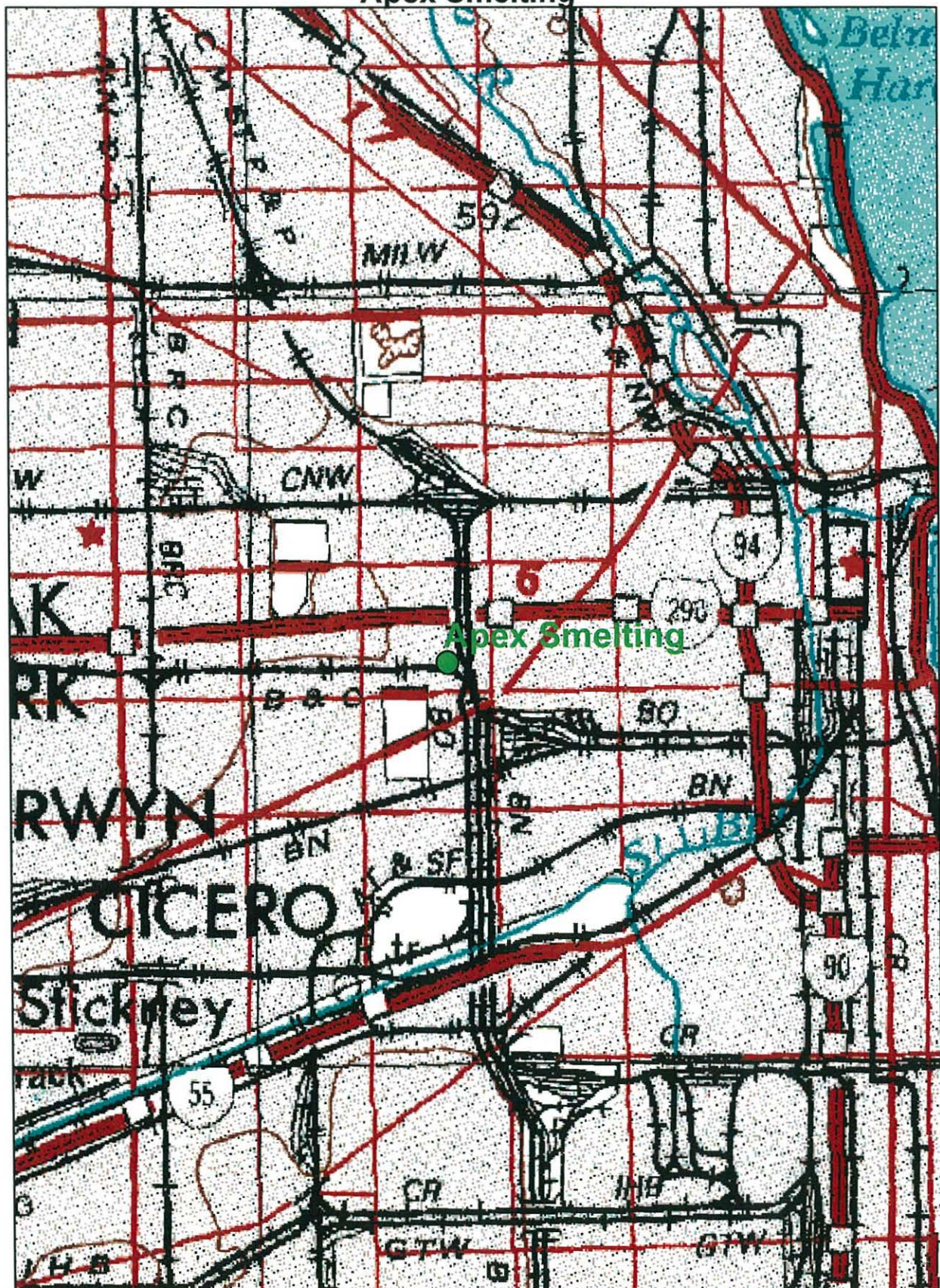


**Figure 4**  
**4-Mile Radius Map**  
**Apex Smelting**





Figure 5  
Topo Map  
Apex Smelting





# TABLES



## XRF Data

Date	Reading	Cr	Cr +/-	Fe	Fe +/-	Co	Co +/-	Ni	Ni +/-	Cu	Cu +/-	Zn	Zn +/-	As	As +/-	Pb	Pb +/-	Time
21-Jul-15	2	<LOD	132	11216	214	400	58	<LOD	59	<LOD	30	96	8	<LOD	11	42	5	11:37:31
21-Jul-15	3	<LOD	137	8662	186	188	52	69	21	37	11	192	12	<LOD	12	45	5	11:39:54
21-Jul-15	4	<LOD	135	11842	228	284	59	<LOD	61	44	11	196	12	<LOD	15	98	7	11:41:30
21-Jul-15	5	<LOD	113	8216	160	<LOD	131	<LOD	52	<LOD	27	38	6	<LOD	8	<LOD	10	11:43:14
21-Jul-15	6	<LOD	138	14165	281	280	68	<LOD	67	<LOD	35	129	10	<LOD	14	53	6	11:45:18
21-Jul-15	7	<LOD	129	19853	337	503	75	<LOD	68	33	11	70	7	<LOD	12	45	5	11:47:23
21-Jul-15	8	<LOD	159	16523	364	361	85	<LOD	81	<LOD	40	75	10	<LOD	13	30	6	11:49:32
21-Jul-15	9	<LOD	150	13896	278	<LOD	197	<LOD	69	<LOD	34	249	14	<LOD	12	50	6	11:50:57
21-Jul-15	10	<LOD	99	14319	214	272	52	<LOD	52	55	9	795	20	<LOD	15	158	7	11:52:42
21-Jul-15	11	131	43	11292	207	244	54	<LOD	49	<LOD	29	430	16	<LOD	13	61	5	11:54:00
21-Jul-15	12	<LOD	150	20823	373	440	81	<LOD	69	<LOD	33	128	10	20	6	88	7	11:56:42
21-Jul-15	13	<LOD	136	13925	260	338	64	<LOD	63	53	12	180	11	<LOD	17	116	8	11:58:09
21-Jul-15	14	<LOD	93	5804	118	173	37	<LOD	46	37	9	397	14	<LOD	20	235	9	12:00:17
21-Jul-15	15	<LOD	109	13487	226	338	57	<LOD	55	372	18	913	24	<LOD	32	593	16	12:01:50
21-Jul-15	16	<LOD	134	10407	215	<LOD	164	137	24	53	12	277	14	<LOD	15	67	6	12:04:33
21-Jul-15	17	<LOD	138	9926	212	<LOD	167	<LOD	59	<LOD	34	167	11	<LOD	11	28	5	12:06:16

LOD Below Level of Detection